AMENDMENTS TO THE CLAIMS

The following listing of the claims replaces all prior claims submitted in the subject application.

1. (Currently amended) A method for assaying ~~an~~ activation state of ~~a~~ platelets comprising ~~detecting catalysis of~~

(a) providing a mixture comprising said platelets, a prothrombin-converting enzyme and a ~~modified prothrombinase~~ substrate of said prothrombin-converting enzyme[[,]]; and

(b) assaying a product produced in step (a) ~~to a modified prothrombinase product~~, ~~wherein~~ said product having the property that said product does not activate platelets~~, by a prothrombinase which is associated with the platelet~~.

2. (Currently amended) The method of claim 1 wherein said substrate is a modified prothrombin and said ~~the detection of the catalysis of a modified prothrombinase substrate comprises detecting the production of~~ product is a modified thrombin~~, wherein said thrombin does not activate platelets~~.

3. (Currently amended) The method of claim [[1]] 2 wherein ~~detecting~~ assaying ~~the catalysis a~~ said modified thrombin ~~prothrombinase substrate~~ comprises ~~detection~~ assaying a catalytic activity of said modified thrombin ~~catalytic activity~~.

4. (Currently amended) The method of claim 1 wherein said prothrombin-converting enzyme is exogenous ~~the prothrombinase comprises is an exogenous prothrombinase factor Xa, factor Va and one or more members selected from the group consisting of a PS:PC vesicle and a platelet~~.

5. (Currently amended) The method of claim 2 [[1]] wherein said modified prothrombin ~~the modified prothrombinase substrate~~ comprises prothrombin which is chemically derivatized by the addition of one or more chemical groups selected from the group consisting of an acyl group, an acetyl group, a succinyl group, a maleyl group, a polyethylene glycol group, an acetylated polyethylene glycol group, a pyridoxal 5'-phosphate group and a dichlorotriazinylaminofluorescinyl group.

6. (Currently amended) The method of claim 5 wherein said modified prothrombin ~~the modified prothrombinase substrate~~ comprises prothrombin which is chemically derivatized by the addition of an acetyl group wherein the acetyl group is donated by sulfo-N-succinimidyl acetate.

7. (Currently amended) The method of claim 2 [[1]] wherein said modified prothrombin ~~the modified prothrombinase substrate~~ is a product of an allele of a prothrombin gene selected from the group consisting of Metz and Quick I.

8. (Currently amended) The method of claim 3 [[2]] wherein said assaying activity ~~the detection~~ of said modified thrombin comprises an assay selected from the group consisting of a Western blot, an Enzyme Linked ImmunoSorbent Assay, an immunodiffusion assay, a surface ~~plasmin~~ plasmon resonance assay, and a fluorescence proximity assay.

9. (Cancelled)

10. (Cancelled)

11. (Currently amended) The method of claim 3 wherein ~~the detection~~ said assaying ~~of~~ catalytic activity ~~modified thrombin catalytic activity~~ comprises detecting cleavage of a peptide.

12. (Currently amened) The method of claim 11 wherein the peptide is glycyl-L-prolyl L-arginine wherein the amino terminal end of the peptide is linked to a tosyl group and the carboxyl terminal end of the peptide is linked to a p-nitroanilide ~~p-nitroanalide~~ group.

13. (Currently amended) A kit for assaying ~~an~~ activation state of ~~a~~ platelets comprising:

(a) a substrate of a prothrombin-converting enzyme, ~~prothrombinase~~ said substrate having the property that when said substrate is converted by said prothrombin-converting enzyme to a product, said ~~which has been modified so that, when by prothrombinase, a modified prothrombinase~~ product ~~which~~ does not activate platelets ~~is produced~~; and

(b) an assay of said product ~~the modified thrombin that is produced a prothrombinase product assay~~.

14. (Currently amended) The kit according to claim 13 wherein the ~~prothrombinase product~~ assay of said product is selected from the group consisting of a Western blot, an Enzyme Linked ImmunoSorbent Assay (ELISA), an immunodiffusion assay, a surface ~~plasmin~~ plasmon resonance assay, a chromogenic peptide cleavage assay, a polyacrylamide gel electrophoresis analysis, and a fluorescence proximity assay.

15. (Currently amended) The kit of claim 13 wherein the ~~modified prothrombinase~~ substrate is prothrombin which is chemically derivatized by the addition of one or more chemical groups selected from the group consisting of an acyl group, an acetyl group, a succinyl group, a maleyl group, a polyethylene glycol group, an acetylated polyethylene glycol group, a pyridoxal 5'-phosphate group and a dichlorotriazinylaminofluorescinyl group.

16. (Currently amended) The kit of claim 13 wherein the ~~modified prothrombinase~~ substrate is a product of an allele of a prothrombin gene selected from the group consisting of Metz and Quick I.

17. (Currently amended) The kit of claim 13 wherein the ~~prothrombinase product~~ assay of said product comprises reagents for a chromogenic peptide cleavage assay wherein the reagents comprise a peptide having a sequence cleaved by thrombin.

18. (Currently amended) The kit of claim 17 wherein the peptide is glycyl-L-prolyl L-arginine wherein the amino terminal end of the peptide is linked ~~crosslinked~~ to a tosyl group and the carboxyl terminal end of the peptide is linked ~~crosslinked~~ to a ~~p-nitroanalide~~ p-nitroanilide group.

19. (Currently amended) The kit of claim 13 further comprising one or more reagents selected from the group consisting of human ~~a-thrombin~~ thrombin, calcium ionophore A23187, factor Xa, Sulfo-N-succinimidyl acetate, factor Va and phospholipid vesicles comprising phosphatidylserine and phosphatidylcholine.

20. (Original) The kit of claim 13 further comprising one or more components selected from the group consisting of a glass vial, a microtiter plate, water and a syringe.